

**EXHIBIT B:**  
**SCOPE OF WORK AND SCHEDULE**

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Pursuant to the Agreed Order to which this Scope of Work & Schedule is attached, the PLPs shall take the following remedial actions at the Site. These actions shall be conducted in accordance with Chapters 173-340 and 173-204 WAC unless otherwise specifically provided for herein:

A. The PLPs shall conduct the remedial actions described below:

- Prepare a **Work Plan for Remedial Investigation/Feasibility Study (RI/FS Work Plan)** – The RI/FS Work Plan will describe project management; data collection and analysis to address both potential upland and in-water (i.e., adjacent marine sediment) contamination; and remedial alternatives evaluation activities that will be considered. A site-specific health and safety plan will also be included in the draft RI/FS Work Plan, meeting the requirements of WAC 173-340-600 and -810 respectively, describing the process for public involvement and worker safety during the project. The PLPs shall submit the RI/FS Work Plan to Ecology for review and approval.
- Conduct a field **Remedial Investigation and Feasibility Study (RI/FS)** – The PLPs shall conduct field data collection (Remedial Investigation) as described in the approved RI/FS Work Plan. The PLPs shall conduct Feasibility Study based on the results of the field Remedial Investigation.
- Prepare a draft **Remedial Investigation/Feasibility Study Report (RI/FS Report)** – The draft RI/FS Report will be combined as a single document and will present the following:
  - Conclusions of the RI activities including delineation of the extent and magnitude of contamination associated with all media of concern at the Site.
  - A conceptual site model detailing the identified contaminant migration pathways and all potential receptors.
  - The FS portion of the report will present and evaluate cleanup action alternatives to address the identified contamination at the Site. Based on the evaluation of alternatives (WAC 173 340-350[8]), the FS will identify a

- Develop a draft **Cleanup Action Plan (CAP)** – Upon Ecology approval of the final RI/FS Study Report, the PLPs shall develop a draft CAP in accordance with WAC 173-340-380 that provides a proposed cleanup action alternative to address contamination at all impacted media in both upland and in-water areas (i.e., adjacent marine sediment) based on the results of RI/FS. The draft CAP shall include a general description of the proposed cleanup action alternative; cleanup standards developed from the RI/FS Study and rationale regarding their selection; a schedule for implementation; description of any institutional controls proposed; and a summary of applicable local, state, and federal laws pertinent to the proposed cleanup actions.

#### **1. Preparation of A Work Plan for Remedial Investigation/Feasibility Study**

The PLPs shall develop an **RI/FS Work Plan** (including draft, draft final, and final versions) that includes a scope of work to delineate and quantify (i.e., identify the levels of contamination) the potential contaminants in all media (i.e., soil, groundwater, surface water, and adjacent marine sediments) and any toxic effects or other deleterious substances in marine sediment. The work plan shall also address the proper handling of all wastes generated from the site during RI/FS (e.g., soil cuttings, groundwater development and purge water, excess sediment sample material, free-product, etc.). Note that all draft and final documents for Ecology review may be submitted in redline strike-out format (preferably in Microsoft® WORD format) to facilitate the review. The RI/FS Work Plan shall be conducted meeting the requirements of WAC 173-350 and should include the elements listed below:

- a. Development of a site-specific Health and Safety Plan (HSP) and a Sampling and Analysis Plan (SAP) for both upland and adjacent marine sediments – This section should also include quality assurance/quality control requirements that should be included in the RI/FS Work Plan. The SAP should be based on the type, quality, and quantity of data necessary to support selection of a cleanup action. The SAP should provide the details on numbers

and locations of samples for each media and the analytical requirements. These plans shall conform to the requirements specified in WAC 173-340-810 and 173-340-820, respectively.

Additional sediment sampling is also required under the SMS to fully investigate the extent and magnitude of marine sediment contamination released at the Site. A **separate** sediment SAP (i.e., separate from the upland SAP) must be submitted to Ecology for review and approval before any sampling is conducted. In addition, any sampling of the marine sediments must be done in accordance with the SMS and the *Sediment Sampling and Analysis Plan Appendix*<sup>1</sup>, Ecology Publication No. 03-03-043.

- b. Investigation of Site Background and Setting – This section will include detailed descriptions of the following:
- 1) The property and site operational/industrial history (including current and previous ownership).
  - 2) All previous investigations and past remedial actions if any. Note that any prior remedial actions are considered to be interim and not a final cleanup action.
  - 3) Historical sources and releases of contamination (include a review of historical photos and Sanborn Maps).
  - 4) Current site conditions (including descriptions of surface features, geology, soil and the vadose zone, surfacewater hydrology, hydrogeology, and meteorology).
  - 5) Current and future land and water use (including descriptions of human populations).
  - 6) The terrestrial/aquatic ecological setting including a description of ecological receptors and potentially threatened/endangered species.

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<sup>1</sup> See URL: <http://www.ecy.wa.gov/biblio/0309043.html>

- c. Evaluation of Existing Data – The existing analytical data, including data points impacted by prior interim remedial actions (if any), should be plotted (as accurately as possible) on both historical and current aerial photographs using geo-referencing techniques. Review the sample locations with respect to identified sources and areas where suspected releases (e.g., outfalls, storm water drains, spills, dumping, leaks, etc.) have occurred. All of the existing analytical data collected at the Site should be evaluated in terms of data usability (analytical methods used to evaluate the effectiveness of a cleanup action shall comply with the requirements in WAC 173-340-830) and be screened against the most protective preliminary cleanup levels identified under an unrestricted land use scenario. Both non-detect and detected data should be included in the screening. Identify sampling points containing exceedances on a map, and also discuss the adequateness of the reporting limits (i.e., Method Detection and Practical Quantitation Limits) in terms of achieving the preliminary cleanup levels for the Site. Chemicals exceeding the preliminary cleanup levels should be identified as indicator hazardous substances for the Site.
- d. Development of Preliminary Conceptual Site Model (CSM) – The CSM should describe release mechanisms from the potential primary sources of hazardous substances to secondary and tertiary sources, the exposure media and routes, and the potential human and ecological receptors. The CSM should reflect both current conditions and potential future development in assessing exposure pathways.
- e. Establishment of Preliminary Cleanup Levels applicable and identification of any and all applicable state and federal laws under WAC 173-340-710 – Based on the CSM, identify likely cleanup levels {e.g., levels established under MTCA [see WAC 173-340-700 through 173-340-760] and SMS [see WAC 173-204] for Puget Sound Marine sediments, and applicable state and federal laws} under a residential (unrestricted) land use scenario. Note that the cleanup levels must consider all applicable pathways including direct contact (including ingestion and inhalation), cross-media transfer pathways (i.e.,

leaching to groundwater, groundwater migration to surface water/adjacent marine sediments, and vapor intrusion pathway, etc.), and exposure to terrestrial and/or aquatic ecological and human receptors. Identify all necessary permits and approvals to allow the remedial works.

- f. Schedule and Reporting – This section should contain the schedule and reporting requirements for the RI/FS project as defined in this Order.

## **2. Conduct A Field Remedial Investigation and Feasibility Study**

The PLPs shall conduct the field RI as described in the approved RI/FS Work Plan and FS based on the results of the RI.

- a. Field Remedial Investigation Approach – The PLPs shall conduct a field RI based on the background information gathered, past interim remedial actions at the Site if any, and the evaluation of existing data for the Site. The RI approach should be consistent with WAC 173-340-350. Identify the overall and general concept for conducting the RI at the Site. The PLPs shall conduct a thorough Site characterization work to fill in any data gaps (e.g., characterization of ground water contamination, etc.) identified in the RI work plan and new data gaps identified during the course of field RI activities.

The RI field investigation will be designed to identify the full extent and magnitude of contaminants and toxic effects in upland and in-water areas. Media evaluated will include residual waste (e.g., free product, sludge), soil, groundwater, adjacent marine sediment, and surface water. The PLPs shall provide Ecology with the results of the investigation so that a determination can be made with regard to whether additional investigation is required to define the full nature and extent of contamination. The information provided to Ecology should describe the analytical results of the field activities including the identification of indicator hazardous substances, the affected media, preliminary cleanup levels, the extent of contamination (plotted on maps), and any data gaps that need to be filled to define the nature and extent of contamination and toxic effects. Additional field investigation (if necessary based on initial results) will be conducted to further define the nature and

extent of contamination and toxic effects based on findings during the initial investigation.

- b. Feasibility Study Approach – The PLPs shall conduct a FS to develop and evaluate remedial alternatives for cleanup of the Site. The FS approach should be consistent with WAC 173-340-350 and should consist of the following sections:

- 1) Establishment of Cleanup Levels, Points of Compliance, and Remediation Levels – Unless otherwise specified under this Order, cleanup levels and points of compliance should be established for each hazardous substance in each medium and for each exposure pathway. The PLPs may also consider establishing potential remediation levels as defined per WAC 173-340-355.
- 2) Identification of Applicable or Relevant and Appropriate Requirements – The Feasibility Study should include additional information or analyses to comply with the State Environmental Policy Act (SEPA) or other applicable laws to make a threshold determination per WAC 197-11-335(1) or to integrate the RI/FS with an environmental impact statement per WAC 197-11-262.
- 3) Delineation of Media Requiring Remedial Action
- 4) Development of Remedial Action Objectives – Remedial Action Objectives should provide general descriptions of what the Site cleanup is designed to accomplish, which is media-specific. Remedial action objectives are established on the basis of extent and magnitude of the contamination, the resources that are currently and potentially threatened, and the potential for human and ecological (both terrestrial and aquatic) exposures at the Site. Clearly define a basis and rationale for Remedial Action Objectives for each media at the Site.
- 5) Screening of Cleanup Action Alternatives – A reasonable number and type of cleanup action alternatives should be evaluated, taking into

account the characteristics and complexity of the Site, including current site conditions and physical constraints. Evaluation of cleanup action alternatives and the selection of preferred cleanup alternative must meet the requirements of WAC 173-340-360.

- 6) Evaluate opportunities to perform remedial actions in a fashion that coincidentally enhances habitat. Elements of the remedial action will be evaluated for restoration opportunities in consultation with Ecology as plans for cleanup are developed<sup>2</sup>.

- 7) References

### **3. Prepare a Draft Remedial Investigation/Feasibility Study Report**

A draft, draft final, and final RI/FS report that meets the requirements of WAC 173-340-350 shall be prepared that presents the results of RI and that provides information regarding the full extent and magnitude of soil, groundwater, surface water, and adjacent marine sediment contamination and toxic effects and provides potential and preferred cleanup action alternatives for the cleanup of the contamination present at the Site.

### **4. Develop A Draft Cleanup Action Plan**

Upon the approval of the final RI/FS report, the PLPs shall prepare a draft and draft final CAP in accordance with WAC 173-340-380 and 173-204-580 that provides a proposed cleanup action to address the contamination present at the Site. The draft CAP shall include a general description of the proposed cleanup actions along with following sections:

- a. A general description of the proposed cleanup action and rationale for selection including results of any remedial technology pilot studies if necessary.
- b. A summary of other cleanup action alternatives evaluated in the RI/FS.

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<sup>2</sup> The Site is being overseen by Ecology and work is being done in an expedited manner under the Governor's Puget Sound Initiative. The Initiative focuses on cleaning up contamination as well as restoring Puget Sound. Ecology recognizes that many cleanups can be designed and implemented in a manner that improves habitat values and provides for shoreline restoration in conjunction with remedial actions. However, because of current and future land use, it is unlikely that meaningful habitat restoration opportunities exist at the site. Therefore evaluation of restoration opportunities will not constitute a significant part of the RI/FS process at this Site.



- c. A summary of applicable local, state, and federal laws pertinent to the proposed cleanup actions.
- d. Cleanup standards and rationale regarding their selection for each hazardous substance and for each medium of concern at the Site based on the results of the RI/FS.
- e. Descriptions of any institutional/engineering controls if proposed.
- f. A schedule for implementation of field construction work.

B. The PLPs shall perform the actions required by this Order according to the following schedule:

**1. Remedial Investigation/Feasibility Study Work Plan Submittal**

- a. Draft RI/FS Work Plan – The draft RI/FS Work Plan shall be due 75 calendar days after finalization of this Order. The draft Work Plan will then undergo a 30-day review period by Ecology.
- b. Draft Final RI/FS Work Plan – The draft final RI/FS Work Plan shall address comments/suggestions submitted by Ecology on the draft RI/FS work plan. The draft final RI/FS work plan shall be due 20 days after Ecology provides its comments on the draft work plan. This draft final will then undergo a 20-day review period by Ecology.
- c. Final RI/FS Work Plan – The final RI/FS Work Plan shall address comments/suggestions submitted by Ecology on the draft final RI/FS work plan. The final RI/FS work plan shall be due 20 days after Ecology provides its comments on the draft final work plan.

**2. Field Remedial Investigation and Feasibility Study**

- a. Field Remedial Investigation/Feasibility Study – RI field activities shall be commenced within 30 days of submittal of the final RI/FS work plan to Ecology.. The field RI results should be provided to Ecology 30 calendar days after the validation of all RI/FS analytical data.

- b. Additional field RI activities (if needed) – These additional field RI activities are to adequately delineate the extent and magnitude of contamination at the Site. The scope, schedule and submittal requirements for additional field RI activities shall be developed by the PLPs, and shall be submitted to Ecology for final review and concurrence. –

### **3. Remedial Investigation/Feasibility Study Report Submittal**

- a. 1<sup>st</sup> draft RI/FS Report – The first draft RI/FS report shall be due to Ecology 120 calendar days after receipt of all analytical data collected during the RI/FS. This draft will then undergo a 30-day review period by Ecology.
- b. 2<sup>nd</sup> draft RI/FS Report – The second draft RI/FS report shall be due to Ecology 60 calendar days after receipt of Ecology comments on the 1<sup>st</sup> draft RI/FS report. This draft will then undergo a 30-day review period by Ecology.
- c. Draft final RI/FS Report – The draft final RI/FS report shall be due 15 days after receipt of Ecology comments on the 2<sup>nd</sup> draft RI/FS report. This draft final RI/FS report will then go to a 30-day public comment period.
- d. Final RI/FS Report – The final RI/FS report shall be submitted to Ecology 30 days following Ecology's completion of the responsiveness summary to public comment on the draft final RI/FS report.
- e. Environmental Data Submittals – All sampling data (including all historic data described in Attachment A of this Agreed Order) shall be submitted to Ecology in both printed and electronic formats in accordance with Ecology's Toxics Cleanup Program Policy 840 (Data Submittal Requirements) and/or any subsequent procedures specified by Ecology for data submittal. Policy 840 is presented in Exhibit C of this Agreed order. Data shall be supplied to Ecology in electronic format (i.e., EIM and SEDQUAL) 30 days following the completion of the Draft Final RI/FS Report.

#### **4. Cleanup Action Plan Submittal**

- a. Draft CAP – The draft CAP shall be submitted to Ecology 30 days after finalization of the draft final RI/FS Report. This draft CAP will then undergo a 30-day review period by Ecology.
- b. Draft Final CAP – The draft final CAP shall address comments/suggestions submitted by Ecology on the draft CAP. This draft final shall be due 15 days after submittal of Ecology comments of the draft CAP.